DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY MATERIEL COMMAND
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AMC PAMPHLET NO. 5-23

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Management

DIMINISHING MANUFACTURING SOURCES AND MATERIAL SHORTAGES

1. **Purpose.** The purpose of this pamphlet is to--

a. Establish processes for identifying and resolving the problems associated with Diminishing Manufacturing Sources and Material Shortages (DMSMS), in accordance with Department of Defense (DOD) and Army policy reflected in DOD 4140.1-R, AR 700-90, AR 710-1 and other applicable regulations.

b. Document the Army DMSMS Program and assign overall management of the program to Deputy Chief of Staff (DCS) for Research, Development and Acquisition (AMCRDA).

c. Define the Army DMSMS Program, prescribe goals, identify procedures, establish objectives, and assign responsibilities for implementing and managing a comprehensive and coordinated program.

2. **Scope.** The scope of this pamphlet applies to the following:

a. Headquarters, U.S. Army Materiel Command (HQ AMC); AMC major subordinate commands (MSC) and separate installations and activities reporting directly to HQ AMC that are threatened by potential/actual obsolescence/nonavailability.

b. Any production tool, process, ingredient, additive, skill, or manufactured material, part or component commonly referred to as an item, whether foreign or domestic made that is potentially/actually obsolete/nonavailable.

3. **References.** Applicable and related publications are listed in appendix A.

4. **Explanation of abbreviations and terms.** For the purpose of this pamphlet, the definitions of abbreviations and terms are provided in the glossary.

5. **Responsibilities**. a. Headquarters, AMC serves as the Army proponent for DMSMS under the authority of AR 700-90.

b. The Commander, U.S. Army Materiel Command, has designated the DCS AMCRDA responsibility for AMC staff management of the DMSMS Program. Support and coordination agency responsibilities are assigned by applicable Missions and Functions regulations in support of the DMSMS program.

c. The DCS AMCRDA, HQ AMC, will--

(1) Serve as the Army proponent representative and maintain overall cognizance of the DMSMS Program.

(2) Monitor and support the DMSMS Program resource requirements.

(3) Designate an AMCRDA organization as the lead organization to manage the DMSMS Program and focal point to--

(a) Establish, implement, manage, and support the DMSMS Program.

(b) Prepare and distribute the policies and guidance required for the Army DMSMS Program.

(c) Establish and chair the Army DMSMS Working Group.

(d) Serve as the Army DMSMS representative at the DOD and other Services level.

(e) Monitor all DMSMS Program management plans.

(f) Develop an automated DMSMS Identification, Notification and Flagging Operation (INFO) system that receives official DMSMS notifications from the DOD DMSMS repository GIDEP (Government-Industry Data Exchange Program), performs required screening processes, and then informs all affected Army activities, organizations and/or systems. This system will also input all required data from the Army to the DOD DMSMS repository GIDEP as required by DOD.

(g) Develop a single Army data entry point for collection and entry of obsolescence/nonavailability information into the Army DMSMS INFO system.

(h) Develop a mechanism to evaluate program cost effectiveness.

(i) Develop coalitions with program and item managers of potential resolution programs (MTS, OSCR, VE, ManTech, Computer-Aided Acquisition and Logistics Support (CALS), etc.) and other activities, as appropriate, to facilitate obsolescence/ nonavailability resolution. Use the relationships to promulgate Modernization Through Spares (MTS) strategies, when appropriate, as a primary means to handle DMSMS cases.

(j) Develop, in cooperation with the MSC DMSMS Program Managers, a simplified coordination mechanism, within established functional areas, to deal with all areas of the DMSMS program. This will include interactions, exchange of information, and cooperation within DOD, other Government organizations, and industry.

(k) Promote participation in and information sharing with GIDEP and other government/industry programs that will identify and share methodologies needed to manage DMSMS.

(l) Consolidate the annual DMSMS Program resource requirements and supporting documentation of AMC organizations and submit the data to the Assistant Deputy Chief of Staff for Research Development and Acquisition - Business Operations.

(m) Develop, in coordination with the MSC DMSMS Program Managers, training material(s) that will promote program awareness.

(n) Promote DMSMS program awareness through the use of publications, periodicals, reports, briefings, etc.

(o) Assist in the resolution of DMSMS cases, as requested.

(p) Serve as the AMC representative to adjudicate, clarify, interpret, and defend Program issues.

(q) Facilitate Intra-Army DMSMS communication.

(r) Coordinate the efforts of all AMC organizations in planning, developing, and executing long-range solutions to both current and potential DMSMS problems.

d. The commanders of the AMC MSCs will designate a DMSMS program manager that will--

(1) Implement an MSC DMSMS Program per DOD 4140.1-R, ARs 700-90 and 710-1, and this pamphlet.

(2) Coordinate the efforts of their organizations in planning, developing, recording, executing, and reporting solutions for both current and potential DMSMS problems.

(3) Provide MSC specific information relating to DMSMS results, as requested by the HQ AMC focal point.

(4) Report DMSMS resolution information, as appropriate, to GIDEP, appendix E. Interim reports, if appropriate, are encouraged.

(5) Develop team relationships with program executive offices (PEO); program managers (PM); item managers (IM); Industrial Base (IB), Title III, and Foreign Military Sales (FMS) representatives; Principal Assistants Responsible for Contracting (PARC); and contracting officers to address obsolescence/ nonavailability.

(6) Develop coalitions with program and item managers of potential resolution programs (MTS, OSCR, VE, ManTech, etc.) and other activities, as appropriate, to facilitate obsolescence/ nonavailability resolution. Use the relationships to promulgate MTS strategies as a primary means to handle DMSMS cases.

(7) Provide guidance, support and information to PEOs; PMs; IMs; IB, Title III, and FMS representatives; PARCs; weapon system managers; engineers and integrated materiel managers (IMM); program managers of MTS, OSCR, VE, ManTech, etc., and others as required, reporting directly to the MSC for DMSMS problem resolution.

(8) Provide DMSMS alert information to all program/ activity managers co-located with the MSC but not covered in paragraph 5.d.(7) above.

(9) Establish communications with other Services, Government Organizations, Industrial Trade Associations and Academia.

e. Program/activity managers reporting directly to the MSC will cooperate and support the MSC DMSMS program manager in identifying, resolving, reporting, etc., DMSMS issues.

f. Program/activity managers co-located with the MSC but not covered in paragraph 5.d.(7) above will be encouraged to comply with 5.e. above.

6. **Goal**. It is the goal of AMC to institute and promote a comprehensive and coordinated Army DMSMS Program and form core coalitions with programs/activities that can support efficient and effective resolution of obsolescence/nonavailability. This will be accomplished by performing, as a minimum, the following:

a. Identify and assess the availability and/or obsolescence of domestic and foreign-produced items and materials for current and future Army systems.

b. Coordinate with the IB team and promote the maintenance of an adequate production base that will ensure item availability and provide competition in the acquisition of items during all phases of the life cycle.

c. Encourage research, use of acquisition and logistics reform and strategy, performance specifications, nontechnical solutions, horizontal technology insertion, commercial off-the-shelf products, commercial processes, new development, and use of descriptive language with execution through programs like MTS, OSCR, VE, etc., to maximize item availability.

d. Establish and maintain open communications among the AMC organizations, other military services, Government organizations, industry, trade associations, and academia to share methodologies, exchange information, and eliminate, where appropriate, duplicate resolutions of the same obsolescence/ nonavailable alert.

e. Encourage the development and use of Government/organic fabrication facilities for low-volume production of items identified as nonavailable.

f. Identify, document, and report cost effectiveness for DMSMS case resolution.

g. Resolve nonavailability problems by using the best value solution that will maximize the availability of items and maintain system/equipment performance requirements through the life cycle.

h. Promote the use and incorporation of computer-aided design and manufacturing techniques into the technical data package (TDP), and thoroughly document system/equipment design and manufacturing processes through computer-integrated manufacturing (CIM) practices.

i. Ensure to the extent possible, realizing that performance-based specifications could limit visibility, that nonavailable and obsolete items are not designed into new Army systems/equipment. If identified obsolete items cannot be deleted from a system/equipment during the design, production, or redesign stage; the affected organization will take actions to find a source for the item(s) that has the potential for being available for the life of the requirement.

j. Encourage the use of design techniques that will mitigate/minimize technology obsolescence in the future sustainment of Army weapon systems.

7. **Objectives**. The objective of the DMSMS Program is to support readiness by minimizing obsolescence/nonavailability problems in Army system/equipment. Program personnel will achieve the objective by taking proactive and reactive steps to support development and implementation of solutions that preserve readiness and support Army goals. Specifically they will--

a. Institute policies, plans, programs, procedures, and guidance for a structured DMSMS program to promote a uniform, responsive, and totally coordinated effort within the AMC community that will identify and cost-effectively resolve DMSMS problems.

b. Provide a DMSMS Program in support of the PEOs; MSCs; PMs; IMs; IB, Title III, and FMS representatives; PARCs; weapon system managers; engineers; IMMs; program managers of MTS, OSCR, VE, ManTech, etc., and other key organizations.

c. Identify obsolete/nonavailable and potentially obsolete/nonavailable items in Army systems/equipment during any period of their life cycle.

d. Provide access to obsolete/nonavailable alert information to all appropriate program/activity managers.

e. Institute procedures to improve response and shorten the time it takes to assess available alternatives to DMSMS alert notices.

f. Capture and distribute DMSMS trends.

g. Establish the communication links required for executing the DMSMS program.

h. Communicate resolutions across program, command, and service lines to facilitate potential reduction in cost and duplication.

8. **Procedures**. a. DMSMS Program Managers will encourage PEOs, PMs, SMs, IMs, system engineering PARCs, and contracting officers to recognize the need to include DMSMS clauses in any contract efforts that could be affected by obsolescence/nonavailability that will protect the government. When appropriate, statement(s) of work (SOW) should include, but is not limited to, contractor participation in GIDEP and a requirement for identifying and/or resolving, during a specified time period, the DMSMS problems such as maintaining replacement sources, searching and reporting on alternatives or replacement parts, redesigning, etc. General and specific comments to support DMSMS are available in--

(1) FAR 7.105, Contents of written acquisition plans.

(2) DFARS 207.105(b)(17), Contents of written acquisition plans,

(3) DOD 5000.2-R paragraph 3.3, Acquisition Strategy

(4) MIL-HDBK 965, Acquisition Practices for Parts Management.

Examples of potential SOW language are included in appendix A, MIL-HDBK 965 and appendix F.

b. The AMC installations and activities will, when confronted with item obsolescence/nonavailability use the partial list of Considerations and Remedies in appendix B, the Specific Procedures and Guidelines listed in appendix C, and Extraordinary Measures listed in appendix D. The courses of action enumerated should not be considered as all-inclusive and additional and/or alternative actions should be considered when necessary.

c. DMSMS information will be coordinated through the GIDEP DOD DMSMS database and the GIDEP DMSMS World Wide Web (WWW) sites.

d. DMSMS information will be distributed to all appropriate PEOs; PMs; IMs; IB, Title III, and FMS representatives; engineers; program managers of MTS, OSCR, VE, ManTech, etc., and other key individuals/organizations (i.e., logistics/readiness organizations, contracting officers, Council of Economic Analysis (COEA), RD&E Centers, USASAC, and industry partners).

9. **Funding**. a. *Personnel*. Industrial Preparedness Operations (IPO) Account, program element 213045 will provide baseline funding for MSC personnel.

b. *Equipment*. Equipment and software essential to and for the management of the DMSMS program may be funded through program element 213045. The HQ AMC focal point will review and approve all such requests.

c. Program support. Unless anticipated, planned, budgeted, or otherwise considered prior to a DMSMS notice, the program, i.e., support system, is unlikely to have funds available to resolve obsolescence/nonavailability cases. Types of funds appropriate to consider for resolution include Procurement, Operation and Support, Research and Development, Title III, and Army Working Capital funds.

The proponent of this pamphlet is the United States Army Materiel Command. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, HQ AMC, ATTN: AMCRDA-AI, 5001 Eisenhower Avenue, Alexandria, VA 22333-001.

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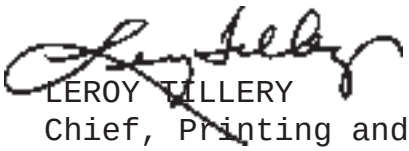

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APPENDIX A

REFERENCES

15 C.F.R. 700, Code of Federal Regulations

ANSI/AIAA R-100-1996, Parts Management

AR 12-8, Operations and Procedures

AR 70-1, Army Acquisition Policy

AR 710-1, Centralized Inventory Management of the Army Supply System

AR 700-90, Army Industrial Base Program

DA Economic Analysis Manual

DA Pamphlet 70-3, Army Acquisition Procedures

Defense Production Act (DPA) of 1950 (50 US Code App. 2061 *etseq.* Title III 1995 (Up for 3-year renewal 1999 - 1001)

DOD Regulation 4140.1-R, DOD Materiel Management Regulation

DOD Directive 4140.1, DOD Materiel Management Policy

DOD Directive 5000.1, Defense Acquisition

DOD Regulation 5000.2-R, Mandatory Procedures for Major Defense Acquisition Program (MDAP) and Major Automated Information System (MAIS) Acquisition Programs

DFARS 207.105(b)(17), Contents of Written Acquisition Plans

FAR 7.105(b)(12), Contents of Written Acquisition Plans (Test and Evaluation)

FAR 8.405-5, Termination for Default

FAR 11.603, Priorities and Allocations - Procedures

FAR 28.104, Annual Performance Bonds

AMC-P 5-23

FAR 49.4, Termination for Default

MIL-HDBK-965, Acquisition Practices for Parts Management

MIL-STD-1556 (B), Government/Industry Data Exchange Program (GIDEP) Contractor Participation Requirements

APPENDIX B

CONSIDERATIONS AND REMEDIES

The Acquisition Activity (AA) or program/activity will consider the following factors, as appropriate, to select the best solution for a DMSMS case. Interim procedures may be applied to permit a better assessment of the options.

a. How much time is available before production will be discontinued?

(1) Assuming the contractor has produced the item within the past 2 years and notice was given without sufficient time for a proper analysis, the contracting officer may request Defense Priorities and Allocation System (DPAS) assistance to force the contractor to delay his/her action.

(2) DMSMS cases can stem from a variety of events, e.g., fire, flood, and sabotage. If the supplier has insufficient resources to rebuild or replace essential equipment, it may be appropriate to consider government assistance.

b. Is the impact to readiness easily determined?

c. Are there several systems likely to be impacted by the contractor’s action?

(1) If the DMSMS case is likely to have an impact on several systems, coordination should be initiated to do an assessment on the combined impact, in addition to independent assessments.

(2) If multiple systems are affected, however, it may be necessary and appropriate to execute more than one solution.

d. Where is the impacted system(s) in its life cycle?

e. What is the shelf life of the item?

f. Are there environmental considerations? (i.e., storage, production, handling)

g. Has the impacted system been sold, lent, or leased to a foreign government that stipulates that the United States (U.S.) has an obligation or responsibility to ensure the future operational capability of the system.

h. Is the system under a co-production agreement?

i. Is there reliable data for usage and failure rates?

j. Can MTS, OSCR, VE, or other similar program techniques be used to mitigate or solve DMSMS problems over the system life cycle?

APPENDIX C

SPECIFIC PROCEDURES AND GUIDELINES

1. DMSMS case(s) identification/notification starts with an official notification from GIDEP of an affected Part Number (PN)/Commercial and Government Entity (CAGE) combination which allows us to recognize and identify the system/equipment that has the potential problem. The planned DMSMS INFO system then assigns an Army Alert Number (AAN) to each of these PN/CAGE records, for audit purposes, and then reviews the record for Army applicability. If the record has Army applicability, it will become an Army DMSMS case and be assigned an Army Case Number (ACN). The appropriate MSC(s) and GIDEP will then be notified by the DMSMS INFO system. It is also essential that all affected systems, programs, activities, and foreign customers as applicable, be notified whenever an MSC receives an Army DMSMS case.

a. The MSC DMSMS Program Manager is responsible for the notification of each Army DMSMS case to all affected systems, programs, activities, and foreign customers as applicable, that are either supported and/or are tenant activities of the notified MSC.

b. The MSC DMSMS Program Manager is responsible for maintaining and supporting their MSC functions within the DMSMS INFO system and ensuring that, as appropriate, the DOD GIDEP data base has been correctly updated.

c. The MSC DMSMS Program Manager is also responsible, in concert with their GIDEP representative, to ensure that any MSC identified DMSMS problem(s), from any source other than GIDEP, are forwarded to GIDEP, in accordance with their procedures, for official notification to the Army DMSMS INFO system.

2. Impact considerations. The following should be considered in determining the resolution to the DMSMS cases:

a. Life cycle. A prime driver for potential solutions to a DMSMS case is where the item is in the life cycle. An item late in its life cycle would require a small life-of-type buy and would probably not be cost effective for a redesign.

b. Form, fit, or function. If a substitute item can be identified and tested for acceptability to form, fit, and function, either at the item or subassembly level, the case will have minimal impact except for financial considerations.

c. Supply and maintenance. When investigating alternatives, the AA should ensure that there has been consideration to the impact on the supply chain and maintenance program that could result from having different parts for the same system.

d. Multiple systems. When an obsolete/nonavailable part is used in more than one system, every effort must be made to notify all appropriate program/activity representatives. The MSC DMSMS Program Manager should encourage and facilitate, when appropriate, discussion on a joint Army resolution. Multiple system utilization that crosses Service lines will be documented in GIDEP to potentially facilitate resolution at even a higher level.

e. Cause. The circumstance under which a DMSMS case arises may help steer the program manager to solutions. Nonavailability may occur due to any of the following circumstances:

(1) Obsolescence. This occurs when the item is no longer a state of the market. A case may be initiated even though the Army has no intention of procuring the item again because it has already been replaced or the system supported has been taken out of inventory.

(2) Technological advances. This normally occurs when an item is no longer profitable to produce because a replacement is available that offers greater value.

(3) Business or market trends. Declining markets can cause an item to become unprofitable. However, it is also possible that a company has generated a replacement that is not backward compatible.

(4) Vendor viability. (For all the below cases, the Defense Contract Management Command Area Office can be contacted to determine the condition of a defense supplier.)

(a) Natural disaster. In the case of a natural disaster, the proprietor of the item will be preoccupied with matters more urgent than notifying the government that production has shut down.

(b) Sabotage, industrial espionage, and war.

1 Under the scenario of sabotage, less firms should be effected.

2 Counterfeit parts may appear on the market, which do not meet the performance standards of the original.

(c) Legal changes. The laws pertaining to safety or the environment may force a supplier to stop production of an item. Local, state, or federal law can all contribute to the notice.

(d) Going out of business.

3. Assessment of alternatives. Practical alternatives to a DMSMS case are greatly influenced by where the item or supported system is in its life cycle. However, it is possible that a single item could support several systems that are at different points in their life cycle resulting in a much more intense analysis of alternatives and a mix of offsets to benefits to any single solution.

a. Preproduction. When the system is still in Research and Development or Low Rate Initial Production, DMSMS case resolution may best be addressed through--

(1) Preplanned product improvement. Continue production while ensuring that a replacement item can be easily integrated into the system later in the life cycle.

(2) Modification or redesign. Modify or redesign the end item to drop the part in question or replace it with another.

(3) Redefined military requirement. Redefine military requirement through appropriate engineering support activities, and consider buying from a commercial source. This redefinition may include MIL-SPEC waivers. Such a course of action might induce the emergence of additional sources.

(4) Commercial item or nondevelopmental item substitution. Replace the DMSMS component with a commercially available item.

(5) Modernization through spares. Use modernization through spares acquisition strategy and techniques to replace the obsolete part(s).

(6) Implementation of design techniques to mitigate/ minimize technology obsolescence.

b. Production. When the system is in production, DMSMS case resolution may be best addressed through--

(1) Modification or redesign. Modify or redesign the end item to drop the part in question or replace it with another.

(2) Modernization through spares. Use modernization through spares acquisition strategy and techniques to replace the obsolete part(s).

(3) Breakout. Separate the DMSMS part from the component or subsystem to facilitate redesign or replacement.

(4) Redefined military requirement. Redefine military requirement through appropriate engineering support activities, and consider buying from a commercial source. This redefinition may include MIL-SPEC waivers. Such a course of action might induce the emergence of additional sources.

(5) Bridge buy. Make a bridge buy of a sufficient number of parts to allow time to develop another solution.

(6) Life-of-type buy. Procure a sufficient quantity of the DMSMS part to ensure full production plus repair parts for the expected life cycle of the system. Costs for packaging, storage, and transportation must be considered.

(7) Contractor requirement. Require a contractor, through contractual agreements, to maintain an inventory of DMSMS items for future production use.

c. Postproduction. When the system is in postproduction, DMSMS case resolution may be best addressed through--

(1) Another source. A smaller company might undertake production that is no longer profitable for a larger company.

(2) An existing substitute. Obtain an existing substitute item that will perform fully (in terms of form, fit, and function) in place of the DMSMS item.

(3) After-market vendor. Identify or seek an after-market producer to obtain and maintain the design, equipment, and process rights to manufacture the component after the original manufacturing ceases production.

(4) Redefined military requirement. Redefine military requirement through appropriate engineering support activities, and consider buying from a commercial source. This redefinition may include MIL-SPEC waivers. Such a course of action might induce the emergence of additional sources.

(5) Modernization through spares. Use modernization through spares acquisition strategy and techniques to replace the obsolete part(s).

(6) Emulation. Use current manufacturing processes to produce a substitute item (form, fit, and function) for the DMSMS item.

(7) Government/organic fabrication facility. Consider the use of any government/organic fabrication facility when an obsolete/nonavailable item could qualify as a special fabrication project.

(8) Contractor requirement. Require a contractor, through contractual agreements, to maintain an inventory of DMSMS items for future production use.

(9) Reclamation. Reclaim DMSMS parts from marginal or out-of-service equipment or, when economical, from equipment that is in a long supply or potential excess position. This assumes the end item has not been transferred to Defense Material Recovery Organization (DMRO) for disposal. The Integrated Materiel Management Center (IMMC) should be able to assist in identifying the quantity and location of those systems that hold potential for reclamation.

(10) Bridge buy. Make a bridge buy of a sufficient number of parts to allow time to develop another solution.

(11) Life-of-type buy. Based on estimated life-of-system requirements, program/activities make a onetime procurement of enough material to last until the end items being supported are no longer in use. Although this is normally the least desired solution, it may be in the best interest of the government to buy a sufficient quantity of an item to satisfy the now and anticipated requirements prior to the production capability being lost.

(12) System replacement. Replace the system in which the DMSMS item is used. This alternative would require extensive cost analysis.

4. Economic analysis. Any proposed solution to a DMSMS case must consider the mission, cost (the total cost including transportation, handling, and storage), after contractor offsets to the government and the expected payback, cost avoidance or savings, if any. Issues to be considered include those factors listed in appendix B, Considerations and Remedies.

5. Funding sources (potential).

a. Value Engineering Change Proposal (VECP).

b. Warranty.

c. Title III.

d. Manufacturing Technology (MANTECH).

e. Army Working Capital Fund (AWCF).

f. Production Base Support (PBS).

g. Consideration from the contractor.

h. Performance Bond.

i. Independent Research and Development (IR&D).

j. Small Business Innovative Research (SBIR).

k. Dual Use Applications Program (DUAP).

l. Operating and Support Cost Reduction (OSCR).

m. Cooperative Research and Development Agreement (CRADA).

n. Modernization Through Spares (MTS).

o. Commercial enterprise. It may be possible to encourage or entice a competitor to assume or purchase the capability to produce the item.

APPENDIX D

EXTRAORDINARY MEASURES

1. Department of Commerce Directive (Special Priorities Assistance (SPA)).

Fines. Under the Defense Production Act (DPA), (50 U.S.C. app. 2061, et seq.) as provided for in 15 CFR 700.15 and FAR 11.603, a contractor must accept a rated order unless one of the rejection provisos apply. As such, a contractor who ceases to produce an item may face a fine of $10,000, 1 year in jail, or both. Informing a contractor of this law may influence them to maintain production under some circumstances.

2. Reverse engineering.

3. Government-owned facility.

4. Subsystem replacement.

5. Early system retirement.

APPENDIX E

REPORTING

Within 30 days of receipt or as stipulated in the DMSMS case notification, the identified MSC system(s), program(s), activity(s), etc., will provide to the MSC DMSMS Program Manager, using, if available, the electronic means provided through the computer-based DMSMS INFO system, the following information. Incomplete reports will be updated every 30 days.

1. Course of action taken, e.g., what is the bottom-line; what action was taken to resolve the DMSMS case. This paragraph should include a statement on the impact to the system(s) supported with respect to performance, cost, availability, etc.

2. Supplier’s data.

   a. Name, address, and cage code.

   b. Date and method of notification.

   c. Cause of notice.

3. Impacted system(s) data.

   a. Nomenclature.

   b. Quantity.

4. Item data.

   a. Descriptions (descriptor, part number, national stock number, etc.).

   b. Replacement/substitute item description, if applicable.

5. Assessment factors, i.e., describe those factors listed in appendixes B and C that impacted the course of action selected.

6. DMSMS program manager data.

   a. Name, address, voice and facsimile phone numbers, office symbol, E-mail address, etc.

   b. Distribution, i.e., WWW sites, publications, etc., where the case was posted or advertised.

APPENDIX F

SAMPLE DMSMS STATEMENT OF WORK (SOW) LANGUAGE

DMSMS SOW requirements comments and sample DMSMS SOW language. The comments/recommendations for inserting DMSMS language in contract SOWs were extracted from MIL-HDBK 965. The sample DMSMS paragraphs were taken from actual contracts and should only be used as a guide.

Military Handbook

1. MIL-HDBK-965

a. Diminishing Manufacturing Sources (DMS) Requirement. If DMS is a concern for a program or a contract, then the acquisition activity (AA) should specify in the SOW any requirement for identifying and/or resolving, during a specified time period, the DMS or obsolescence problems such as maintaining replacement sources, searching, and reporting on alternative or replacement parts, redesigning, etc.

b. Optional task. The contractor shall convene a parts control board to address parts management issues.

c. DMS task. The DMS task should be separate from the parts management options. The DMS task could be applicable to all options, and the AA must decide if the period of expected use, criticality, and cost of the hardware to be purchased warrant a DMS task. Suggested SOW wording is as follows:

> The contractor shall review, through the period of performance of the contract, the Government/Industry Data Exchange Program (GIDEP), Diminishing Manufacturing Source (DMS) notices, and other supplier notifications for applicability of the (optional added word: operational) hardware being delivered. The contractor shall notify the Acquisition Activity within ____ days of any DMS situation that effects current deliveries or subsequently will effect equipment maintenance and repair (data item number for notification of DMS problems).
>
> Optional task: Through the period of performance of the contract, the contractor shall: (1) identify alternate sources, replacement parts, or optional part numbers for parts and materials that become obsolete and (2) revise the assembly drawings to incorporate the new information. If a direct replacement is not possible, the contractor shall notify the Acquisition Activity.

d. GIDEP task. The GIDEP task should be separate from the above options and is appropriate with any of them. The decision on whether to impose the GIDEP task should be based on the factors in paragraph c above. Suggested SOW wording is as follows:

The contractor shall participate in the Government/Industry Data Exchange Program (GIDEP) Alerts and Problem Advisories for potential impact to hardware both in production and delivered to the Acquisition Activity. If an Alert or Problem Advisory has the possibility of causing a system malfunction or of inhibiting the specified performance, the contractor shall notify the Acquisition Activity. For Alerts or Advisories that identify parts or materials that are noncompliant to hardware specifications or drawings but do not affect performance requirements of production items, the contractor shall dispose of them through the internal quality assurance process (data item number for GIDEP response).

Statement of Work Language.

2. AMSEL-LC-LM-PR Army Parts Control Plan

Diminishing Manufacturing Sources and Material Shortage (DMSMS). The offeror shall develop and implement procedures within facility to ensure an integrated approach to improved responsiveness and use of the most cost-effective solutions to DMSMS problems affecting the system. The Parts Control Plan Procedures (PCPP) shall include the offeror's procedures for addressing DMSMS concerns in the selection of components.

3. Joint Tactical Information Distribution System (JTIDS) SOW, FRP #2

System Engineering

Parts Control Program. The contractor shall establish and implement a parts obsolescence program. This program shall include a report to categorize and quantify identification of obsolete parts, problem resolution, and a recommended approach for mitigating risks associated with obsolete parts over the life of the JTIDS system. The contractor shall maintain a parts selection, control, and standardization program in accordance with this task. The contractor may select parts from the criteria listed below, provided that they meet component performance (e.g., tuning, tolerance, temperature, etc.) and environmental and physical characteristics (form, fit, and function) requirements to the shop replacement unit (SRU) level. The use of all plastic parts shall be in accordance with paragraph 3.4.1.2 (DI-MISC-80508/I).

a. PPSL (Y256C020).

b. MIL-STD.

c. QPL.

d. QML.

e. DESC/SMD.

f. Parts from ISO-9000 certified vendors.

g. Parts previously-approved NSPARS.

h. MIL-FLOW (MIL-FLOW is defined as parts that are specified to meet the form, fit, and functional requirements. However, these are only exposed to a subset of the full MIL-STD screening and testing).

All parts meeting the above criteria that were previously approved for use on the 2/2H program are authorized for continuous use. Any parts that were approved for use and used in JTIDS reliability growth testing, or in JTIDS Lots 1, 2, or 3 verification/qualification tests, or any parts which meet or exceed military specification requirements shall be authorized for use. Any other requests that do not meet these requirements must have prior approval from the Government via a contracts letter in accordance with paragraph 3.4.1.1. The Government will provide a response within 45 days of receipt of the contractor request.

Reported via Contracts Data Requirements List (CDRL), Title Technical Report, Subtle Interchangeable Parts List.

4. Navy SPS-49 Radar Parts Control Plan

Obsolete Parts. For obsolete parts, the contractor is authorized to select replacement parts in the sequence listed below. The contractor shall update the substitute parts list with the replacement component in lieu of updating affected assembly parts lists and the use of vendor part numbers in lieu of Source Control Document (SCD) part numbers shall be allowed. If a commercial part is selected as a replacement for an obsolete part, the contractor shall notify Naval Sea Systems Command (NAVSEA) in writing within 5 working days of the selection and provide a status of commercial part selection at the program’s reviews.

Precedence of Replacement Part Selection:

a. New Source for the same part.

b. New technology direct replacement part.

c. Lower MIL quality level part.

d. MIL-STD-883 screened or tested part.

e. Commercial ceramic part.

f. Commercial plastic part (requires prior NAVSEA approval).

5. Army Tube-Launched, Optically-Tracked, Wire Command-Link Guided Missile System (TOW) Request for Proposal (RFP) Language

Part 2- DMSMS/Obsolescence/Producibility: This part shall describe the offeror's approach, which details the methodology to be used in the identification and resolution of DMSMS/Obsolete parts/Producibility. The approach shall: (a) Outline the process to be used to identify and resolve DMSMS/Obsolete parts/ Producibility. This process shall include all types of resolutions to be used by the offeror (i.e., substitutes/ replacement parts, emulation, redesign, etc.) and his/her respective reasons for use (i.e., no replacement available, multiple component obsolete per board, etc.), (b) Outline the process to be used to identify new sources, (c) Include procurement/test lead times. (The offeror must take into account that there will be no change to the contract price or delivery schedule due to obsolescence.), (d) Describe specific analysis and testing to be performed to ensure that solutions to DMSMS/Obsolescence/Producibility will satisfy all component, subassembly, and system level form, fit, and function requirements, and (e) Describe available tools, equipment, and techniques to be used in the process.

Technical: The adequacy of the offeror's approach and how the proposal demonstrates its understanding of the Government's requirement will be evaluated. The Technical Area is divided into four elements: Production Capability, DMSMS/Obsolescence/ Producibility, Quality and Production, and Scheduling. Production Capability and DMSMS/Obsolescence/Producibility are equally weighted and each is slightly more important than quality, which is somewhat more important than production scheduling.

DMSMS/Obsolescence/Producibility: This element consists of the following five factors:

a. The proposed process the contractor will use to identify and resolve obsolete parts will be evaluated for adequacy. The evaluation will consider the specific procedures, criteria, and techniques the contractor proposes to use.

b. The adequacy of the proposed process the contractor will use to identify new sources will be evaluated.

c. The proposed procurement/test lead times will be evaluated to determine whether or not the proposed schedules will allow for completion of deliveries within the contract period of performance.

d. The adequacy of the offeror’s proposed analysis and testing would be evaluated to ensure that it would satisfy all component, subassembly, and system level form, fit, and function requirements.

e. The availability of tools and equipment to be used in performance of the contract and the adequacy of the techniques to be employed will be evaluated.

6. ARMY TOW SOW

DMSMS/Obsolescence/Producibility

a. Introduction. This SOW requirement is intended to address the problems associated with components, parts, or assemblies that are or may become obsolete during performance of this effort. The contractor is responsible for identification, resolution, and implementation for all DMSMS/Obsolescence/ Producibility issues associated with production and delivery of hardware under this contract in accordance with the TDP. For purposes of this clause, Producibility is defined as the ability to procure, fabricate, assemble, and test an item using available production technology while still meeting the necessary quality and performance.

b. Scope.

(1) Prior to production and throughout performance of this contract the contractor shall perform a detailed evaluation of all technical data associated with this contract. Such evaluation shall include, but not be limited to, analysis, identification, and recommended corrections for problems associated with DMSMS/Obsolescence/Producibility.

(2) The contractor shall submit RFD/W's that provide solutions that assure that all components, assemblies, and parts thereof, can be produced, fabricated, and assembled in complete accordance with the requirements of the technical data, corrected as required by this clause. DMSMS/Obsolescence/Producibility issues and their resolutions shall be prepared and submitted using the RFD/W process.

(3) The identification of DMSMS/Obsolescence/ Producibility Issues and the necessary correction thereof shall not be cause under this contract for any price increase or revision in the delivery schedule.

c. Contractor Obligations. The above shall apply to all technical data supplied as a part of any change issued under this contract, provided, however, that any additional DMSMS Obsolescence/Producibility effort required by reason of a Government issued change shall entitle the contractor to an equitable adjustment for which the amount shall be included in the settlement of the change order for the Government-issued change.

d. Approval Requirements-Rejections.

(1) The Government reserves the right to reject any DMSMS/Obsolescence/Producibility RFD/W by providing written notice to the contractor within 20 workdays after receipt of the RFD/W by the Procurement Contracting Officer (PCO). The Government will provide justification for any disapproval.

(2) Approval of a DMSMS/Obsolescence/Producibility RFD/W shall be (whichever may occur first):

(a) By written notice from the PCO by letter, Fax or other form of reply designated therein as an approval of RFD/W.

(b) Assumed by the contractor 20 workdays after receipt of the DMSMS/Obsolescence/Producibility RFD/W by the PCO.

(3) Upon Government approval of a DMSMS/Obsolescence/ Producibility RFD/W, as aforesaid, the contractor's obligations relating to such DMSMS/Obsolescence/Producibility proposal shall be discharged to the extent that the deficiency is corrected in the hardware. If the incorporation of such approved DMSMS/ Obsolescence/Producibility RFD/W does not correct the deficiency, the contractor shall yet remain responsible for resubmitting and accepting any further change to the technical data without

increase in contract price or extension in delivery schedule and incorporate such DMSMS/Obsolescence/Producibility change into the contract items not yet accepted by the Government.

(a) Government Information. The Government reserves the right to convey information to the contractor for his/her use in DMSMS/Obsolescence/Producibility changes. Any such information so conveyed shall not entitle the contractor to any price or delivery schedule adjustment or damages pursuant to any clauses of this contract or otherwise.

(b) DMSMS/Obsolescence/Producibility Disputes. Failure of the parties to agree upon any determination of the necessity for, or the designation of, a change to be made under this provision shall be a dispute concerning a question of fact within the meaning of the Disputes clause of this contract.

(c) Rights and Remedies. The rights and remedies of the Government provided in this provision is in addition to and does not limit any rights afforded to the Government by any other clause of this contract.

(d) Production Methods and Processes. Changes to The TDP shall not be submitted under this clause, which are recommended solely to permit performance in accordance with contractor’s or subcontractor’s production methods or processes.

(e) Rights in Technical Data. Any and all data submitted by the contractor, as required in paragraph 4, shall be provided the Government with rights in accordance with the Rights in Technical Data clause of this contract.

7. ARMY UH-60 - SOW

a. Provide microelectronic management and obsolescence avoidance by conducting engineering technology assessment(s). The result of the assessment(s) is an understanding of the current microelectronic status of the system, the scope of any immediate nonavailability and obsolescence problem, the magnitude of the future problem and any possibilities for alleviating the impacts. Possible solutions will include alternative manufacturing, redesign, substitution, emulation, and life-of-type buy. A detailed cost analysis of the alternative solution(s) will be formulated. The contained microelectronic data will be monitored regularly for GIDEP affectivity.

b. Deliverables. Technical memoranda, trip reports, meeting minutes, coordination documentation.

c. Modernization Through Spares (MTS). Provide engineering assistance and support to procurement and the project manager's office in developing and implementing a MTS process. Support Acquisition Reform Initiatives and management of Total Cost of Ownership to reduce the Life Cycle Cost and implement AMC cost reduction initiatives.

8. ARMY BLACKHAWK - SOW

a. Provide microelectronic management and obsolescence avoidance by conducting engineering technology assessment(s). The result of the assessment(s) is an understanding of the current microelectronic status of the system, the scope of any immediate nonavailability and obsolescence problem, the magnitude of the future problem and any possibilities for alleviating the impacts. Possible solutions will include alternative manufacturing, redesign, substitution, emulation, and life-of-type buy. A detailed cost analysis of the alternative solution(s) will be formulated.

b. Upon completion of paragraph 1a., follow-on studies will be performed as needed. The follow-on studies will include updated technology assessments for newly-obsolete parts and implementation of the proposed solutions. Coordination between the affected organizations and the contractors will be provided.

c. The baseline data base resulting from paragraphs 1a. and 2b. above will be maintained within the Production Control Group, Industrial Operations Division. The contained microelectronic data will be monitored regularly for GIDEP affectivity. Any affectivity will be reported to the pertinent organization(s) with solution recommendations.

d. The Production Control Group shall provide the above services for discrete components and connectors at the request of the customer.

e. The Production Control Group shall provide resolution of the BLACKHAWK procurement problems, based on costs estimated within the funding statement.

APPENDIX G

MANAGEMENT OF HARDNESS CRITICAL ITEMS

DMSMS and Obsolescence management of Hardness Critical Items (HCI)

SCOPE: Director for Applied Technology, Test and Simulation (DATTS) developed a management plan for maintaining the availability of HCIs. HCIs are designated Radiation Tolerant (RT) electronic piece-parts used in ground and air based military systems that have been classified as radiation survivable. A DMSMS tool is the Radiation Tolerance Assured-Source of Supply (RTA-SS) program developed as a means of procuring and maintaining availability RT piece-parts during system development, production, and maintenance cycles.

1. HCIs must be monitored more closely than standard or commercial microelectronics, thus making DMSMS and obsolescence more difficult to manage.

2. HCI initial nuclear radiation testing is performed at system specific levels on electronic components with design margins >2<100. Devices with a design margin <2 are not acceptable and devices with a design margin >100 do not need to be tested. The design margins are established during the design phase through radiation exposure testing, characterization, and circuit analysis. The radiation exposures performed are total gamma dose, neutron, and gamma dose rate (upset, burnout, and gate rupture).

There are two approaches to manage obsolescence: reactive and proactive.

3. A reactive approach must be taken when there has not been time to prepare for the discontinuance of a needed device (electrical or mechanical). Through obsolescence management, system contractors and program offices can react with the certainty that the needed components will be available when required. DATTS has developed the following that can be utilized:

a. Computer networks with GIDEP and other information services.

b. Partnerships with vendors and distributors.

c. Partnerships with die suppliers and third party assembly facilities.

d. Partnerships with suitable testing facilities (radiation and military 883 compliant).

e. Partnerships with system contractors and subcontractors.

f. Brokerage for programs and program offices.

g. Die bank (dry nitrogen storage required).

h. Climate-controlled storage facility.

4. A proactive approach requires the utilization of all reactive processes along with long term planing as follows:

a. Road mapping of manufacturing process.

b. Road mapping of the contractor/subcontractor system/sub-system.

c. Modernization through spares.

d. Planned obsolescence through insertion of new technology.

e. Planned and scheduled redesigns or upgrades.

f. Bridge buys or life-of-type buys based on manufacturer’s/contractor’s road maps.

5. Radiation survivable systems present a major challenge to system program offices when it comes to the management of DMSMS and obsolescence, but through a DMSMS tool like the RTA-SS approach, radiation survivability challenges have been considerably reduced and has proven to be very cost effective.

GLOSSARY

Section I. Abbreviations

AA - Acquisition Activity

AAN - Army Alert Number

ACN - Army Case Number

AMC - Army Materiel Command

AMCRDA - Army Material Command, Research, Development and Acquisition

AR - Army Regulation

AWCF - Army Working Capital Fund

CAGE - Commercial and Government Entity

CALS - Computer-Aided Acquisition and Logistics Support

CDRL - Contract Data Requirements List

CIM - Computer Integrated Manufacturing

COEA - Council of Economic Analysis

CRADA - Cooperative Research and Development Agreement

DATTS - Directorate for Applied Technology, Test and Simulation

DMS - Diminishing Manufacturing Sources

DCSRDA - Deputy Chief of Staff for Research, Development and Acquisition

DLA - Defense Logistics Agency

DFARS - Defense Federal Acquisition Regulation Supplement

DMRO - Defense Material Recovery Organization

DMSMS - Diminishing Manufacturing Sources and Materiel Shortages

DOD - Department of Defense

DPA - Defense Production Act

DPAS - Defense Priorities and Allocation System

DSCC - Defense Supply Center - Columbus

DUAP - Dual Use Application Program

EPA - Environmental Protection Agency

FAR - Federal Acquisition Regulation

FMS - Foreign Military Sales

GEM - Generalized Emulation of Microcircuits

GIDEP - Government and Industry Data Exchange Program

HCI - Hardness Critical Items

HQ - Headquarters

IB - Industrial Base

ICP - Inventory Control Point

ILSM - Integrated Logistics Support Manager

IM - Item Manager

IMM - Integrated Materiel Manager

IMMC - Integrated Materiel Management Center

INFO - Identification, Notification, and Flagging Operations

IPO - Industrial Preparedness Operation

IPT - Integrated Product Team

IR&D - Independent Research and Development

JTIDS - Joint Tactical Information Distribution System

LOT - Life-of-Type buy

MANTECH - Manufacturing Technology

MSC - Major Subordinate Command

MTS - Modernization Through Spares

NSN - National Stock Number

O&M - Operations and Maintenance

OSCR - Operating and Support Cost Reduction

PARC - Principal Assistant Responsible for Contracting

PBS - Production Base Support

PCO - Procurement Contracting Officer

PCPP - Parts Control Plan Procedures

PEO - Program Executive Office

PM - Program Manager

PN - Part Number

POC - Point Of Contact

RD&E - Research, Development and Engineering

RFP - Request for Proposal

RT - Radiation Tolerant

RTA-SS - Radiation Tolerant Assured-Source of Supply

SBIR - Small Business Innovative Research

SCD - Secure Control Document

SM - System Manager

SOW - Statement of Work

SPA - Special Priorities Assistance

SRU - Shop Replacement Unit

TDP - Technical Data Package

TOW - Tube-Launched, Optically-Tracked, Wire Command-Link Guided Missile System

USASAC - United States Army Security Assistance Command

VE - Value Engineering

VECP - Value Engineering Change Proposal

VPSB - Virtual Parts Supply Base

WWW - World Wide Web

Section II. TERMS

After market. The establishment of a new supplier or source of supply for the identical item after the original supplier has abandoned, vacated, or lost the capacity to provide the item.

Alert. Manufacturer's notice through GIDEP or other recognized means that the company intends to or has already stopped manufacturing an item.

Bridge buy. A bridge buy is similar to a life-of-type buy but the purchase quantity is limited to the number of parts required to carry the program until another solution can be developed.

Case. All associated notifications, discussions, investigations, negotiations, analysis, documentation, reporting, and actions involved as a result of a notice of an actual or impending DMSMS situation.

Diminishing Manufacturing Source and Material Shortages (DMSMS). The loss or impending loss of a producer’s/manufacturer’s/ fabricator’s capacity or willingness to maintain or reestablish a capability to provide an item/process/service and/or raw material.

DMSMS Program manager. The individual assigned responsibility at the MSC to implement the DMSMS program and for compliance to the provisions of the program.

Focal point. The official responsible for the policy development, implementation, oversight, and funding management of the DMSMS program for AMC.

Generalized Emulation of Microcircuits (GEM). Generalized emulation is used to produce devices that are form, fit, and function equivalent to original devices at the MIL-STD-883C quality level.

Government/Industry Data Exchange Program (GIDEP). A program for the sharing of information and acquisition, storage, retrieval and dissemination of parts and components reliability-test and failure analysis; hardware systems reliability and maintainability data from development, test, and operational use; test equipment calibration procedures and metrology information; user information on problems and availability of parts, components and systems; and other technological data of interest to the GIDEP participating agencies.

Government/organic fabrication facilities. Government operated facilities for defense unique and/or low-volume production items not easily obtained in the commercial sector.

Item. (Interchangeable with component, material, service, part, and process.) Any raw, in-process, or manufactured commodity, material, article, piece, part, assembly, component, product, or accessory, to include services, processes, technical data, software, or equipment whether from a prime or subcontractor, foreign or domestic.

Life-of-type buy. A one-time procurement for the total future requirement of an item no longer to be available.

Modernization through spares. A spares acquisition strategy applied throughout the material acquisition life cycle to reduce sustainment costs. It is based on technology insertion and use of commercial products, processes, and practices to extend a system's useful life. The acquisition strategy makes it possible to use Operations and Maintenance (O&M) funds to redesign an obsolete part that will produce one or more of the following: increased performance, expanded capacity, lower cost, new design.

Obsolete. The state in which an item is no longer to be available, or available in sufficient quantity, because the item has an outmoded design, construction, or composition rendering its usefulness impracticable, inefficient, or ineffective.

Operation and Support Cost Reduction (OSCR). Operating and Support Cost Reduction is a program to fund engineering design efforts that reduce secondary item acquisition costs, extend the life of the item, and/or improve the reliability, maintainability, and supportability.

Preplanned Product Improvement (P3I). Continue production while ensuring that a replacement item can be easily integrated into the system later in the life cycle.

Reclamation. To remove parts from one system to enable the repair of another.

Redesign. Redesign the end item to drop the part in question or replace it with another.

Shelf life. The period of time that an item can retain useful purpose when stored within the prescribed temperature, humidity, light, etc., tolerances or specifications.

Value Engineering (VE). Value Engineering program is an organized effort directed at the review and analysis of system requirements, function, and design for the purpose of effecting specific trade-offs between cost and these system elements necessary to the fielding of an operational system meeting Army performance requirements at minimum life cycle cost.

Virtual Parts Supply Base (BPSB). Virtual Parts Supply Base exploits advances in telecommunications and computers, specifically the Internet, to provide, rapidly and economically, difficult to obtain National Stock Number (NSN) and non-NSN parts for all categories of Department of Defense (DOD) weapon systems.